

# APPENDIX F



## Butte County Sheriff

### SMS Text-to-9-1-1 via IP Interface

### Test Results

March 27, 2014

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## **Test Cases**

1. Verify PSAP procedures in place when non-test SMS 9-1-1 text is delivered
2. Verify test 9-1-1 SMS text is delivered to correct PSAP and rebid capability
3. Verify action if PSAP does not respond to test 9-1-1 SMS text
4. Verify 2 simultaneous SMS 9-1-1 text can be handled by one call taker
5. Verify bounce back message delivered when third 9-1-1 SMS text is sent
6. Verify text conversation is still up if cell phone is powered down and powered up
7. Verify texter receives bounce back if standing inside Butte County Sheriff jurisdiction but Cell tower centroid is in different PSAP jurisdiction.
8. Verify 9-1-1 SMS text will be delivered to Butte County Sheriff if texter is standing outside Butte County Sheriff jurisdiction but the cell tower centroid is within Butte County Sheriff jurisdiction
9. Verify 9-1-1 SMS texter receives a bounce back when added to deny list (Not available with Intrado solution)
10. Verify 9-1-1 SMS texter receives a bounce back when PSAP has provisioned a Time of Day (Not available with Intrado solution)
11. Verify ability for second call taker to take over SMS text session
12. Verify bounce back is received when both trunks are busy
13. Verify transfer capability from Butte County Sheriff to Chico PD (Not available at this time)
14. Verify results when texter send more than 160 characters and verify results when sending symbols not supported in TTY
15. Verify SMS text-to-9-1-1 sessions are being recorded in ECaTS

<b>TEST #1</b>	<b>Non test Text is sent to Butte County Sheriff</b>
<b>Objective/Description</b>	This test verifies that when Butte County Sheriff receives a non-test text they will manually send canned bounce back response Text (when service is not available)
<b>Resources</b>	Texter in field and centroid within Butte County Sheriff jurisdiction. Call taker to receive text INTRADO to monitor text session
<b>Test Setup</b>	<ol style="list-style-type: none"> <li>1. Verify Texter is ready</li> <li>2. Send test SMS 9-1-1 Text to verify bounce back (from Verizon Wireless)</li> <li>3. Verify TCC is provisioned and ready</li> <li>4. Verify the target PSAP is available.</li> <li>5. Verizon Wireless/INTRADO turn on 9-1-1 texting for Butte County Sheriff</li> </ol>
<b>Procedure</b>	<ol style="list-style-type: none"> <li>1. Text message "I have a flat tire"</li> <li>2. Call taker should recognized this is not part of our testing (because the text does not start with this "is a test") and reply back with the canned bounce back message (should be same message they would see from Verizon Wireless)</li> <li>3. PSAP to end text session.</li> </ol>
<b>Verification</b>	<ol style="list-style-type: none"> <li>1. Verify bounce back received from Verizon Wireless on initial test</li> <li>2. Once service is activated verify canned bounce back is sent by PSAP.</li> <li>3. Verify release text received by Texter.</li> </ol>
<b>Text time</b>	Send to receive:
<b>Notes</b>	<p><b>Date/Time:</b></p> <p><b>Tester:</b></p> <p>Canned bounce back not built in so was unable to test this case.</p>

<b>TEST #2</b>	<b>Texter send 9-1-1 SMS text and routes to Butte County Sheriff</b>
<b>Objective/Description</b>	This test verifies Text can be delivered to Butte County Sheriff and rebid for location is functioning.
<b>Resources</b>	Texter in field and centroid within Butte County Sheriff jurisdiction. Verizon cell phone with location agent activated Call taker to receive text INTRADO to monitor text session
<b>Test Setup</b>	1. Verify Texter is ready 2. Verify TCC is provisioned and ready 3. Verify the target PSAP is available.
<b>Procedure</b>	1. Send a SMS text (starts with this is a test) to 911 to initiate a dialog. 2. Respond to the incoming RFA at the PSAP and send a few messages back and forth between the PSAP and texter. 3. After 20 seconds rebid for location. 4. PSAP ends text session.
<b>Verification</b>	1. Verify the RFA is received by the PSAP configured for this test case. 2. Verify the transcript is received by the PSAP when the dialog connected, and location information is properly displayed and call back number displayed. 3. Verify all messages sent by the PSAP are sent to the mobile handset. 4. Verify all messages sent by the mobile are received by the PSAP. 5. verify lat/long changes from centroid to actual location of texter 6. Verify release text received by Texter.
<b>Text time</b>	Send to receive: 16 seconds
<b>Notes</b>	<p>Test text from 916-698-XXXX at 10:24:53  Received at BCSO on 9-1-1 CPE text IP window  "this is the 911 office test"  Latitude/longitude was receive in the body of the text (there was not ALI in the ALI screen) 39.623180, -121.619400  Canned message was sent by the PSAP "911 what is your emergency" and "you have reached BCSO"  A few more text were exchanged back on forth  BCSO released the text session at 10:27:38</p> <p>No rebid capability available in this solution</p>

<b>TEST #3</b>	<b>Texter sends SMS to 911, INTRADO TCC receives and provides routing instruction, Route to PSAP – Butte County Sheriff does not respond to text</b>
<b>Objective/Description</b>	This test verifies that TCC responds to an initial text that is not responded to by the PSAP with a canned message.
<b>Resources</b>	Texter in field within Butte County Sheriff jurisdiction. Call taker to receive text INTRADO to monitor text session Timer to time send receive time
<b>Test Setup</b>	1. Mobile phone activated and ready 2. Verify TCC is provisioned and ready 3. Verify the target PSAP is available.
<b>Procedure</b>	1. Send a SMS to 911 to initiate a text session. 2. PSAP does not respond to initial text 3. After 30 seconds TCC send canned message to Texter. 4. If PSAP and Texter converse a couple of times and the PSAP goes silent for 30 seconds, will a canned message be sent to Texter?
<b>Verification</b>	1. Verify the RFA is received by the PSAP configured for this test case. 2. Verify the transcript is received by the PSAP when the dialog connected 3. Verify PSAP non response message received by Texter
<b>Text time</b>	Send to receive: 59 seconds to receive bounce back message
<b>Notes</b>	Test text from 916-698-XXXX at 10:31:20 Received at BCSO on 9-1-1 CPE text IP window “Test, test, test” BCSO did not respond to this text Texter received a bounce back message at 10:32:19

<b>Case #4</b>	<b>Two simultaneous SMS Text 911 from different users, Routed to Butte County Sheriff</b>
<b>Objective/Description</b>	This test verifies that TCC can process the scenario of initiating two dialogs from different texters with the delivery of the messages to Butte County Sheriff .
<b>Resources</b>	2 SMS Texters 1 9-1-1 Call Taker 2 timers
<b>Test Setup</b>	1. Two mobile phones activated and ready 2. Verify TCC is provisioned and ready 3. Verify the target PSAP is available.
<b>Procedure</b>	1. Initiate two dialogs by sending a SMS to 911 from two different mobile handsets simultaneously. 2. Respond to the two incoming RFAs at the PSAP and send a few messages back and forth between the PSAP and texter. 3. PSAP ends text session.
<b>Verification</b>	1. Verify that both RFAs are received by the PSAP configured for this test case. 2. Verify the transcript for each dialog is received by the PSAP 3. Verify all messages sent by the PSAP are sent to the texter. 4. Verify all messages sent by the texter are received by the PSAP.
<b>Text time</b>	Text session 1 send to receive: 916-207-XXXX 11.32 seconds Text session 2 send to receive: 916-698-XXXX 16.34 seconds
<b>Notes</b>	Test text from 916-207-XXXX at 10:37:17 Received at BCSO on 9-1-1 CPE text IP window 10:37:29 “Test Wes” Lat/Lon 39.623180, -121.619400 BCSO replied “you reached BSCO”  Test text from 916-698-XXXX at 10:38:00 Received at BCSO on 9-1-1 CPE text IP window 10:38:16 “Multiple text simo Jim’s phone.2 “ Lat/Lon 39.623180, -121619400 BCSO replied “you have reached BCSO” Another text was sent from both texters and BCSO released the calls

<b>Case #5</b>	<b>Three simultaneous SMS Text to 911 from different texters, INTRADO TCC receives and provides routing instruction, 2 text Route to Butte County Sheriff, 1 text receives a Bounce Back Message</b>
<b>Objective/Description</b>	This test verifies that TCC can process the scenario of initiating two dialogs from different texters with the delivery of the messages to Butte County Sheriff, and the third texter should receive a bounce back message. Butte County Sheriff provisioned with session limit of 2.
<b>Resources</b>	3 SMS Texters 2 9-1-1 Call Taker
<b>Test Setup</b>	1. Three Verizon Wireless mobile phones 2. Verify TCC is provisioned and ready with session limit of 2 3. Verify the target PSAP is available.
<b>Procedure</b>	1. Initiate three dialogs by sending a SMS to 911 from three different mobile handsets simultaneously. 2. Respond to the two incoming RFAs at the PSAP and send a few messages back and forth between the PSAP and mobile handsets. 3. PSAP ends Text session.
<b>Verification</b>	1. Verify that both RFAs are received by the PSAP configured for this test case. 2. Verify the transcript for each dialog is received by the PSAP. 3. Verify all messages sent by the PSAP are sent to the texter. 4. Verify all messages sent by the texter are received by the PSAP. 5. Verify third texter received a bounce back message
<b>Text time</b>	Send to receive:
<b>Notes</b>	<p>For this test, BCSO had 4 dispatchers logged in and had two of them log out. Leaving only 2 dispatchers to take 911 calls and texts</p> <p>Text were sent by the following  916-207-XXXX  916-698-XXXX  530-370-XXXX  530-370-XXXX</p> <p>916-207-XXXX and 916-698-XXXX were received at the PSAP  530-370-XXXX was in queue  530-370-XXXX received a bounce back message</p> <p>Per Intrado, based on an algorithm: the minimum number of texts before bounce backs would be sent would be equal to the # of call takers logged in at a given time per PSAP plus one text waiting in queue.</p>



<b>Test #6</b>	<b>Text Conversation when device powered down powered back up</b>
<b>Objective/Description</b>	This test verifies the text conversation continues even if the mobile phone is powered down and turned back on within 5 minutes.
<b>Resources</b>	Texter in field and centroid within Butte County Sheriff jurisdiction 9-1-1 Call taker Timer
<b>Test Setup</b>	1. Mobile phone activated and ready 2. Verify TCC is provisioned and ready 3. Verify the target PSAP is available.
<b>Procedure</b>	1. Send SMS to 911 to initiate a dialog 2. Respond to the incoming RFA at the PSAP and send a few messages back and forth between the PSAP and mobile 3. Texter powers down mobile phone. 4. PSAP to send another text while phone is powered down. 5. Texter powers on phone after waiting 5 minutes 6. PSAP verifies original SMS conversation is up. 7. Texter sends SMS to continue same text session 8. Respond to the incoming RFA at the PSAP and send a few messages back and forth between the PSAP and texter . 9. PSAP ends text session
<b>Verification</b>	1. PSAP and texter verifies status of SMS conversation was continuous, verify no automatic message was delivered by PSAP or INTRADO because of time between text messages.
<b>Text time</b>	Send to receive: 16 seconds
<b>Notes</b>	<p>Test text from 916-698-XXXX at 10:37:17</p> <p>Received at BCSO on 9-1-1 CPE text IP window 10:37:29</p> <p>“Test Test”</p> <p>Lat/Lon 39.623180, -121.619400</p> <p>BCSO replied “you reached BSCO”</p> <p>Phone was powered down at 10:38:20</p> <p>Phone was powered back on at 10:43:28</p> <p>BCSO placed text on hold</p> <p>Texter placed another text</p> <p>Call Taker could tell there was a new text because the status of the Text said “Updated”</p>

<b>Case #7</b>	<b>Texter initiates 9-1-1 text standing inside Butte County Sheriff Jurisdiction but the centroid of the cell tower is in different PSAP's jurisdiction</b>
<b>Objective/Description</b>	<b>This test verifies that the 9-1-1 SMS texter will receive a bounce back message when centroid is outside PSAP's jurisdiction.</b>
<b>Resources</b>	1. SMS 9-1-1Texter inside Butte County Sheriff jurisdiction but centroid outside Butte County Sheriff jurisdiction 1. 9-1-1 Call Taker
<b>Test Setup</b>	1. One mobile phone activated and ready 2. Verify TCC is provisioned and ready 3. Verify the target PSAP is available.
<b>Procedure</b>	1. Initiate an SMS 9-1-1 text.
<b>Verification</b>	1. Verify that a bounce back message was received
<b>Text time</b>	Send to receive:
<b>Notes</b>	<p>Date/Time: Tester:</p> <p>Cell center centroid was not defined therefore test was not completed</p>

<b>Case #8</b>	<b>Texter initiates 9-1-1 text standing outside Butte County Sheriff jurisdiction but the centroid of the cell tower is in Butte County Sheriff jurisdiction</b>
<b>Objective/Description</b>	<b>This test verifies that the 9-1-1 SMS text will be delivered to Butte County Sheriff.</b>
<b>Resources</b>	1. SMS 9-1-1Texter outside Butte County Sheriff jurisdiction but centroid inside Butte County Sheriff jurisdiction. 1. 9-1-1 Call Taker
<b>Test Setup</b>	1. One mobile phone activated and ready 2. Verify TCC is provisioned and ready 3. Verify the target PSAP is available.
<b>Procedure</b>	1. Initiate an SMS 9-1-1 text. 2. PSAP respond back to texter 3. Exchange a few text 4. PSAP end text session
<b>Verification</b>	1. Verify that 9-1-1 SMS text is received by Butte County Sheriff 2. Verify the transcript for each dialog is received by the PSAP 3. Verify all messages sent by the PSAP are sent to the texter. 4. Verify all messages sent by the texter are received by the PSAP.
<b>Text time</b>	Send to receive:
<b>Notes</b>	<p>Date/Time: Tester:</p> <p>Cell center centroid was not defined therefore test was not completed</p>

<b>Case #9</b>	<b>Add number to Deny List</b>
<b>Objective/Description</b>	<b>This test verifies when a number is added to the deny list they will receive a bounce back message</b>
<b>Resources</b>	SMS 9-1-1 texter from 916-207-XXXX 9-1-1 Call taker
<b>Test Setup</b>	<ol style="list-style-type: none"> <li>1. One mobile phone activated and ready</li> <li>2. Verify TCC is provisioned and ready</li> <li>3. Verify the target PSAP is available.</li> <li>4. Log into the GEM911 Admin tool</li> </ol>
<b>Procedure</b>	<ol style="list-style-type: none"> <li>1. Texter 916-207-XXXX to send text to PSAP</li> <li>2. PSAP sends text back to texter and ends session</li> <li>3. Add 916-207-XXXX to the deny list</li> <li>4. Initiate an SMS 9-1-1 text from 916-207-XXXX</li> </ol>
<b>Verification</b>	<ol style="list-style-type: none"> <li>1. Verify first text from 916-207-XXXX was received by PSAP</li> <li>2. Verify that 9-1-1 SMS texter receives a bounce back message after 916-207-XXXX is added to the deny list.</li> </ol>
<b>Text time</b>	Send to receive:
<b>Notes</b>	<p>Date/Time: Tester:</p> <p><b>No Deny list with this solution</b></p> <p><b>TEST NOT PERFORMED</b></p>

Case #10	Time of Day Setting
<b>Objective/Description</b>	<b>This test verifies when a time of day rule is added to the PSAP PRF subscriber will receive a bounce back message</b>
<b>Resources</b>	SMS 9-1-1 texter from 916-207-XXXX 9-1-1 Call taker
<b>Test Setup</b>	1. One mobile phone activated and ready 2. Verify TCC is provisioned and ready 3. Verify the target PSAP is available.
<b>Procedure</b>	1. Setup PSAP for Time of Day Rule through the GEM9-1-1 Admin Tool - close PSAP for Monday , 1/6/14 from current time until midnight. 2. Initiate an SMS 9-1-1 text
<b>Verification</b>	1. Verify that 9-1-1 SMS texter receives a bounce back message
<b>Text time</b>	Send to receive:
<b>Notes</b>	<p>Date/Time: Tester:</p> <p>No Time of Day setting with this solution</p> <p><b>TEST NOT PERFORMED</b></p>

<b>CASE #11</b>	<b>Verify ability for second call taker to take over SMS text session</b>
<b>Objective/Description</b>	This test verifies that a second call taker at Butte County Sheriff can take over a text session from initial call taker
<b>Resources</b>	Texter in field and centroid within Butte County Sheriff jurisdiction Call taker to receive text Second call taker available to take over text INTRADO to monitor text session
<b>Test Setup</b>	1. Verify Texter is ready 2. Verify the target PSAP is available.
<b>Procedure</b>	1. Send SMS Text message to 9-1-1 2. Butte County Sheriff to reply to Texter 3. Exchange a few texts 4. Have second call taker at Butte County Sheriff take over text session from another call taker position 5. Have second call taker exchange a few texts 6. Have Butte County Sheriff end text session
<b>Verification</b>	1. Verify text was received by first call taker 2. Verify second call taker is able to takeover text session 3. Verify second call taker can see the entire text session 3. Verify release message received by Texter.
<b>Text time</b>	Send to receive:
<b>Notes</b>	Currently with this CPE Verizon, a call taker is unable to take over a text session from the initial call taker

<b>CASE #12</b>	<b>Verify bounce back message received when both trunks are out of service</b>
<b>Objective/Description</b>	This test verifies SMS texter will receive a bounce back message if both trunks are out of service (Butte County Sheriff text limit is set at two)
<b>Resources</b>	Texter in field and centroid within Butte County Sheriff jurisdiction. Call taker to receive text INTRADO to monitor text session Verizon translation team
<b>Test Setup</b>	1. Verify Texter is ready 2. Verify TCC is provisioned and ready 3. Verify the target PSAP is available 4. Verify Verizon translation team ready
<b>Procedure</b>	1. Verizon translation team to take both trunks out of service 2. Texter places SMS text to 9-1-1
<b>Verification</b>	1. Verify the bounce back message is received by the texter
<b>Text time</b>	Send to receive:
<b>Notes</b>	BCSO receives text via NG911 trunks installed during the NG911 Grant Project. Intrado was able to take the text portion of those circuits out of service  Test text from 916-698-XXXX at 11:15:38 "test, test" Texter received bounce back at 11:16:27

<b>CASE #13</b>	<b>Verify transfer capability from Butte County Sheriff to Chico PD</b>
<b>Objective/Description</b>	This test will determine if a texter can be transferred PSAP to PSAP within the IP network
<b>Resources</b>	<p>Texter in field and centroid within Butte County Sheriff jurisdiction.</p> <p>2 mobile phones (one with location agent and one without)</p> <p>Call taker at Butte County Sheriff to receive text</p> <p>Call taker at Chico PD to receive text</p> <p>INTRADO to monitor text session</p> <p>Timer to time send receive time</p>
<b>Test Setup</b>	<p>1. Mobile phones (one with Location Agent active ) and ready</p> <p>2. Verify TCC is provisioned and ready</p> <p>3. Verify the target PSAPs are available.</p>
<b>Procedure</b>	<p>1. Send an SMS text to 9-1-1 to initiate a text session at Butte County Sheriff</p> <p>2. PSAP sends response to initial text – and exchange a few texts.</p> <p>3. Texter drives to Chico to allow initiation of rebid in Chico PD’s jurisdiction</p> <p>4. Texter let’s text team know when they are in place in Chico PD’s jurisdiction with centroid in Chico PD’s Jurisdiction.</p> <p>5. Butte Co Sheriff call taker requests a rebid</p> <p>6. Butte Co Sheriff will need to call Chico PD to let them know they will be sending a text session to them</p> <p>7. Butte Co Sheriff sends texter a text saying they will be transferring texter to Chico PD</p> <p>8. Butte Co Shf attempts a transfer</p> <p>9. Texter sends another text</p> <p>10. That text should arrive at Chico PD</p> <p>11. Chico PD replies to text (they exchange a few text)</p> <p>12. Chico PD ends text session.</p>
<b>Verification</b>	<p>1. Verify the initial SMS text was received by Butte Co Shf</p> <p>2. Verify transfer took place</p> <p>3. Verify the transcript is received by both PSAPs</p> <p>4. Verify texter received all messages and verify PSAPs received all messages</p>
<b>Text time</b>	Send to receive:
<b>Notes</b>	<p><b>Per Intrado Transfer is not available in this solution</b></p> <p><b>TEST NOT PERFORMED</b></p>



<b>Test Case #14</b>	<b>Verify results when texter sends more than 160 characters</b>
<b>Objective/Description</b>	This test will indicate the results when a text is sent with over 160 characters
<b>Resources</b>	Texter in field and centroid within Butte County Sheriff jurisdiction. Call taker to receive text INTRADO to monitor text session Timer to time send receive time
<b>Test set up</b>	1. Mobile phone activated and ready 2. Verify TCC is provisioned and ready 3. Verify the target PSAP is available.
<b>Procedures</b>	1. Send the following text message: <b>Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.</b> Which totals 380 characters.  2. PSAP sends response to initial text. 3. Texter sends text containing following symbols embedded in the text: @ # % & 4. Butte County Sheriff call taker ends text session 5. If screen shot is available please ask call taker to print the screen
<b>Verification</b>	1. Verify the initial SMS text was received by the PSAP 2. Verify the transcript is received by the PSAP 3. Verify texter received the disconnect session text from PSAP
<b>Text time</b>	Send to receive: 18 seconds
<b>Notes</b>	<p>Test text from 916-698-XXXX at 11:29:29  “Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.</p> <p>Received at BCSO at 11:26:47  Split into 3 texts  (1of 3) Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are</p> <p>Approximate Cell sector location provided by network : Latitude, longitude = 39.623180, -121.619400</p> <p>(2 of 3) uncomfortable met on grapes, battlefield of that war we have come to dedicate a portion of that pill as a final resting place for those who here gave</p> <p>(3of 3) their lives that that nation might live. It’s all together fitting and proper that we should do this.  BCSO: “got it”  Texter : “ @#%&amp;”  BCSO: “all came in @#%&amp;” <b>(PSAP RECEIVED EXACTLY WHAT TEXTER SENT)</b></p>

<b>CASE #15</b>	<b>Verify text session are available in ECaTS</b>
<b>Objective/Description</b>	This test will determine if a PSAP using Standard TTY test sessions appear in ECaTS
<b>Resources</b>	ECaTS
<b>Test Setup</b>	None
<b>Procedure</b>	1. Log into ECaTS pull RAW data for 2-5-2014 for Butte County Sheriff
<b>Verification</b>	1. Verify SMS 9-1-1 Text to 9-1-1 was recorded 2. Verify the transcript is received by the PSAP when the dialog connected
<b>Text time</b>	Send to receive:
<b>Notes</b>	<b>MIS</b> <b>Intrado solution is not available in ECaTS at this time--- data was available in the Viper MIS service</b> <b>– Summary and full test session,</b>